

IN THE SUPREME COURT OF INDIA  
CIVIL ORIGINAL WRIT JURISDICTION  
WRIT PETITION (CIVIL) NO. 37 OF 2014

IN THE MATTER OF :

Mathew Thomas

... Petitioner

Versus

Union of India & Ors.

... Respondents

MEMO (A)

WITH

*LIST OF*  
DOCUMENTS

PAPER BOOKS

(FOR INDEX :: KINDLY SE INSIDE)

**ADVOCATE FOR PETITIONER : MS AISHWARYA BHATI**

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A

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MEMO (A)

The Petitioner is filing the enclosed list of documents in the above mentioned matter. It is requested to take on record the said documents.

FILED BY :

Tendered By  
Gopal Subramaniam  
Senior Advocate

MS AISHWARYA BHATI  
ADVOCATE FOR PETITIONER

special leave petition (cr) 2425 of 2011  
uidai v. cbi  
IN THE HIGH COURT OF BOMBAY AT GOA  
CRIMINAL WRIT PETITION NO.10 OF 2014

UNIQUE IDENTIFICATION AUTHORITY  
OF INDIA THROUGH ITS DIRECTOR  
GENERAL AND ANR. Petitioners

Versus

CENTRAL BUREAU OF INVESTIGATION Respondents

Mr. Ravi Prakash, Ms. Udit Singh and Mr. H. D. Naik  
Advocates for the petitioners.

Mr. Joseph Vaz, Special Public Prosecutor for the  
respondent no.1.

Mr. A.N.S. Nadkarni, Advocate General with Mr. D.  
Lawande, Additional Public Prosecutor for the  
respondent no.2.

Coram:- SMT. R. S. DALVI &  
F. M. REIS, JJ.

Date:- 26<sup>th</sup> February, 2014

P.C.

Rule.

2. Mr. Joseph Vaz, learned Special Public Prosecutor  
waives notice on behalf of the respondent no.1 and Mr.  
D. Lawande, learned Additional Public Prosecutor  
waives notice on behalf of the respondent no.2.

3. The petitioner who is Unique Identification  
Authority of India itself has sought to challenge the  
order of the learned Magistrate dated 22.10.2013

passed for providing certain data to the CBI upon an application of the CBI under Section 91 of the Criminal Procedure Code.

4. The application shows the purpose of obtaining the necessary data: it is in respect of investigation in the case of a rape of seven years old girl who was the school student and in which case the incident transpired in a school toilet by an unknown person during the recess time on a given date.

5. The CBI has certain brand of fingerprints obtained from the place of the incident. It was the case of the CBI that thumb impression available with the petitioner could be compared with the fingerprints obtained by the CBI to trace the accused.

6. The investigation is yet in progress. The accused is not traced. The petitioner has been asked to cooperate. The petitioner has challenged the order of the learned Magistrate for providing the time and cost for further investigation.

7. The petitioner has taken up the right to protection of privacy not of itself, but of the information pertaining to other card holders, if such information is to be provided. It is argued on behalf of the petitioner that the impugned order is cryptic and without any reason and hence it is required to be set aside.

8. The petitioner has relied upon the judgment of in the case of District Registrar and Collector Vs. Canara Bank and others, (2005) 1 SCC 496 in which the parameters for providing information which would not infringe the privacy of an individual is being considered. The judgment also mentions the parameters and the limits of providing information with the reasons and objectives for an application in that behalf. The Supreme Court has considered the law relating to unreasonable searches and seizures, arbitrary interference with the privacy of family, Court and correspondence and unreasonableness qua the right of the persons in exercising their privacy. In that case the documents from certain financial institutions, bank etc

which were asked for by the Government authority, were refused as they transgressed those parameters.

The Supreme Court laid down the necessity of reasonable and warranted searches and seizures to be made which would not violate the fundamental rights under Article 20(3) of the Constitution of the India.

9. In this petition, we would have to see from the observations of the Supreme Court whether the fingerprints required for the purpose of further investigation in a case of a ransom paid kidnapper person upon a minor child could be obtained by the CBI. The petitioner has informed the Court that there are number of petitions pending before the Supreme Court and which are being heard along with the main petition no.494/2012 under Article 32 of the Constitution of India filed by Justice K. S. Puttaswamy vs Union of India. Copies of the various petitions are filed before us today.

10. The CSI initially required that it was to be available of all the persons in the State. That request was

modified and only the fingerprints of three specified persons were required. The petitioner refused to provide the information. CBI has obtained independent information by obtaining fingerprints of those persons. Those persons are now not wanted by the CBI as those fingerprints have not matched with the London fingerprints taken by the CBI. Thereafter the CBI has sent a letter to the petitioner enclosing the CD containing a soft copy of the chance fingerprints and requested the petitioner to compare its data with the bio-metric data furnished by the CBI.

11. It is contended by the petitioner that it is impossible in view of their limited competence. Counsel on behalf of the petitioner stated that they are incompetent to have any comparison of the data with what is in the data base based upon such bio-metric information as their software does not permit such comparison.

12. Learned Advocate General and counsel on behalf of the CBI have stated to Court that the chance



AND IN THE MATTER OF:

SPECIAL LEAVE PETITION UNDER ARTICLE  
136 OF THE CONSTITUTION OF INDIA  
AGAINST THE IMPUGNED INTERIM ORDER  
DATED 26.02.2014, PASSED BY THE HIGH  
COURT OF BOMBAY AT GOA IN CRIMINAL  
WRIT PETITION NO. 10 OF 2014

TO,

THE HON'BLE THE CHIEF  
JUSTICE OF INDIA AND HIS  
OTHER COMPANION JUDGES  
OF THE HON'BLE SUPREME  
COURT OF INDIA.

HUMBLE PETITION OF THE PETITIONER  
ABOVENAMED:

MOST RESPECTFULLY SHEWETH:-

1. That the present Petitioner is a citizen of India. Constitution of India for grant of Special Leave Petition to the petitioner herein against the Interim Order dated 26.02.2014 of the High Court of Bombay at Goa in Criminal Writ Petition No. 10 of 2014 filed by the petitioners challenging the order dated 26.02.2014.
2. That in order to appreciate the various contentions raised by the petitioner herein, it is necessary to state the following few facts:-
  - (i) The Petitioner No. 1 Authority came into existence vide Notification No. Notification No. 43011/02 2009-Admin 1

- b) Definition of stages in which the Plan should be implemented on a determination of priorities and allocation of resources for completion of each stage.
- c) Determination of the nature of the machinery necessary for the implementation of the Plan in all its aspects.
- d) Identifying the factors which are tending to retard economic development and determining the conditions which in view of current social and political situation should be established for the successful execution of the Plan.
- e) Appraise from time to time the progress and aid in the execution of each stage of the Plan and the necessary adjustment of policies and measures that such appraisal may show to be necessary.
- f) Public Co-operation in National Development.
- g) Specific programmes for area development notified from time to time.
- h) Perspective planning.
- i) Unique Identification Authority of India (UIDAI) -
  - a. Policy, planning and implementation of Unique Identification Number (UID) for residents in India and all matters related to it.

Unique Identification Authority of India (UIDAI) and connected matters

As an Attached Office to Planning Commission, the mandate of UIDAI is to be within the ambit of above and it

does not include any forensic or criminal investigative mandate. A Copy of the Government of India (Allocation of Business Rules) in exercise of its powers conferred by Clause (3) of Article 77 of the Constitution is annexed herewith and marked as Annexure P-3 [Page No. 54 to 61]

4. It is humbly submitted that the JID project is a complex technology project designed to support e-governance in the country. The implementation of the project itself as well as its usages by other agencies ensures process re-engineering on a substantial scale. In particular manual process and manual database need to be replaced by electronic process and electronic data bases. Supporting administrative arrangements for programme implementation also need to be recast to reap the full benefits of efficiency, transparency, accountability and economy of the resultant e-governance. It is submitted that Aadhaar is a randomly generated 12-digit unique number which the UIDAI issues to all residents in India on a voluntary basis. The number is stored in a secure database and linked to the basic demographics and biometric information – photograph, ten fingerprints and iris – of each individual. It is verifiable in an online, cost-effective way.

5. The random number generated is devoid of any classification based on caste, creed, religion and geography. Further, to ensure uniqueness of the individual, it has been made essential that the biometrics captured are as per the specifications laid down by the Biometrics Standards Committee. A Copy of the Biometrics Standards Committee report dated 20.11.11 is annexed herewith and marked as Annexure P-4... [Page No. 62 to 160]
6. The Petitioner would like to submit the background of the UIDAI scheme further to emphasize the developmental purposes of the programme. The UID scheme is introduced as a means to enhance the delivery of government services. Before the advent of UID scheme, there was no single document which was uniform and acceptable as proof of identity across India – irrespective of age, gender and familial connections. Thus establishing identity has always been a challenge for the poor, particularly when they move from place to place, and as a consequence, lack of proof of identity makes it difficult for the poor to access benefits and services. Hence enrolling for the UID or the Aadhaar may be the first form of identification they will have access to.

#### **7. Aadhaar-Pro-poor Approach**

An important public policy imperative for introduction of Aadhaar was the understanding of the

Government that a very large number of residents, primarily the poorest, are not able to access services and benefits intended for them for want of being able to prove their identity to service providers and agencies that dispense them. It is well known that notwithstanding the provisions of law, the birth of close to half the population in many States is never registered. A large percentage of people do not have a birth certificate, the primary document used to prove identity and citizenship.

An inclusive design for enrolment into Aadhaar was therefore deliberately adopted by the Government of India. It was decided that Aadhaar will prove identity and not citizenship given the difficulty for vast majority, particularly the poor, to obtain a proving their citizenship credentials. Citizens are required to have a certificate or passport issued by the Government, recommendations of a local authority, or other documents contained in its database. The Government of India Data Standards and Verification Architecture Committee Report dated 12/12/2010. The Government adopted the suggested process of verification to be followed for enrolment of residents into the Aadhaar system. Accordingly, three distinct methods of verification for obtaining Aadhaar have been adopted.

- Based on supporting documents
- Based on Introducer system
- Based on National Population Register process of public scrutiny

Each of these methods is well considered, provides for robust verification following a due process and leaves a permanent trail electronically captured, detailing the enrolment of each and every individual into the system.

A copy of the "Demographic Data Standards and Verification Procedure Committee Report" document is annexed herewith and marked as Annexure P-5. [Page No. 161 to 196]

8. Enrolment of residents with proper verification is a key concern of the UIDAI and for this purpose it ensures proper verification of their demographic and biometric information. As a part of its pro-people approach the UIDAI focuses on enrolling into its paper and under privileged communities to many of whom Aadhaar may be the first form of identification but no one gets enrolled for Aadhaar without undergoing the prescribed method of verification.

**Aadhaar – An Enabler for identity verification**

It is submitted that Aadhaar number is an enabler. The benefits of Aadhaar number are:-

**For residents:** The Aadhaar number will become the single source of identity verification. Once residents enroll, they can use the number multiple times - they will not be required to furnish of repeated supporting documents each time they wish to access services such as obtaining a bank account, passport, driving license, and so on. The number will also give migrants mobility of identity.

**For Registrars and enrollers:** The UIDAI will only enroll residents after de-duplicating records. This will help Registrars clear out duplicates from their databases, ensuring significant efficiencies and cost savings. For Registrars focused on cost, the UIDAI's verification processes will ensure lower Know Your Resident (KYR) costs. For Registrars focused on social goals, a reliable identification number will enable them to deliver their reach into groups that will have been difficult to authenticate.

The strong authentication that the Aadhaar number offers will improve services, leading to better resident satisfaction.

For Governments Eliminating duplication under various schemes is expected to save the Government exchequer a substantial amount. It will also provide Governments with accurate data on residents, enable direct benefit programs, and allow Government departments to coordinate investments and share information.

With Aadhaar number integration in various Government schemes, the identity of the beneficiary gets established, which has ensured that the government subsidies are reached to intended beneficiaries. Aadhaar identity and eligibility integration also provides an important tool for the government in the eligibility determination process and in managing the eligibility life cycle for a beneficiary.

9. The use of Aadhaar is being initiated gradually for selected government programmes in districts which have a high coverage of Aadhaar and exception management system has been put in place to ensure that there is no denial of services for want of Aadhaar. Special arrangements have also been put in place for beneficiaries of government programmes to obtain Aadhaar expeditiously without difficulty. This is consistent with the stated policy of



government to use Aadhaar for inclusion of the poor and marginal section of society into the fold of social security programme

#### **Central Government Ministries using Aadhaar based Identity systems:**

1. Ministry of Petroleum and Natural Gas
2. Ministry of Social Justice and Empowerment
3. Ministry of Human Resources (Department of Higher Education)
4. Ministry of Human Resources (Department of School Education and Literacy)
5. Department of Tribal Affairs
6. Department of Minority Affairs
7. Ministry of Women and Child Development
8. Ministry of Health and Family Welfare
9. Ministry of Labour and Employment

#### **State Governments Involvement and Usage of Aadhaar based Identity System:**

1. Andhra Pradesh
2. Chhattisgarh
3. Delhi
4. Haryana
5. Jharkhand
6. Karnataka

7. Madhya Pradesh

8. Maharashtra

9. Puducherry

10. Punjab

11. Rajasthan

12. Himachal Pradesh

13. Sikkim

These Ministries/Department are implementing various programmes using Aadhaar based identity systems. Some other achievements are as follows:

a) 292 banks which have been onboarded for Aadhaar transactions.

b) 300 banks are currently live in Aadhaar Payment Bridge (APB). Details of these banks are attached in alphabetical order dated 15.07.2015 as Annexure P-6. [Page No. 197 to 202]

c) More than 25.6 people have received their MGNREGS wages, posted on their Aadhaar linked authentication services. The system is being used by 100 banks.

As on date, 6.33 crore people have bank accounts linked to Aadhaar and are in a position to receive any subsidy from the Government of India.

These facts are brought to the notice of the Hon'ble Court to emphasize the socio-economic and developmental mandate associated with UIDAI rather than any surveillance or forensic application.

The introduction of Aadhaar needs to be seen in the same vein and as a part of the continuing quest of the Government to improve efficient and transparent delivery of public services.

However, for providing social security benefits and subsidies which are discretionary in nature there cannot be any lawful objection for the Government to insist on the use of Aadhaar to ensure the benefits reach only the entitled persons and also to plug wasteful and fraudulent leakages.

- 10 Aadhaar has been designed specifically to assist in meeting these ends. The Government of India recognizes it as a strategic policy tool for social inclusion, public service delivery reform and for managing the fiscal deficit. The importance and utility of Aadhaar for delivery of public services has also been recognized by this Hon'ble Court in WP(C) No.196, 2001, *PUCI Vs Union of India* and order

dated 14.09.2011 as well as a judgment in Civil Appeal No.958/2013 dated 02.2.2013 (*State of Kerala & Others Vs. President, Parents Teachers Association, SNUJ and Others*). Copies of these judgments are annexed herewith as **Annexure P-7 (Colly)**. [Page No.203 to 238]

11. The Aadhaar scheme is primarily a developmental initiative and its design features enumerated above have been arrived at with the express purpose of improving delivery of social security benefits and services, reducing leakage and wastes, eliminating frauds and corruption and enhancing transparency and accountability.

The scheme has the approval of the Union Cabinet and its funding requirements are being met year after year with the approval of the Parliament under the Appropriation Act. The application of Aadhaar to the social security benefit programmes of the Government is clearly in the larger public interest.

12. The UIDAI is collecting bare minimum demographic information from the residents such as name, age, gender, address and relationship details in case of minors, photograph alongwith biometric information of ten fingerprints and Iris. This is the information that UIDAI requires to provide a well-delineated and unique identity to the residents. As stated previously the collection of biometrics was based on the recommendation of the

Biometrics Standards Committee Report. It is further submitted that the UIDAI biometric system design has followed global best practices. And in designing this biometric system, UIDAI reviewed existing state-of-the-art biometric systems, consulted with the world's top biometric experts, conducted a thorough feasibility study and built a biometric system that is currently considered to be world's largest and the best. UIDAI has also regularly measured and published empirical and verifiable results. Reviews of the facts and the measures of the live production system are in stark contrast with the claims made about efficacy and accuracy of Lion etrics system. A summary of details are as follows:

1. In December of 2003, UIDAI Committee on Biometrics published its report titled "Biometric Design Standards for UID - An Overview".

The Committee acknowledged that most of the large-scale biometric deployments were faced on live and a large number of systems had to meet several challenges in India due to large number of people engaged in agriculture and other manual labour intensive occupations. The committee therefore held extensive meetings and discussions with international experts and technology providers. A technical sub-group analysed fingerprint data collected from Delhi, UP, Bihar, and Orissa and found

that the quality of the data was not substantially different from those collected in Western countries. The committee said that it is possible to improve the accuracy of fingerprint system by additionally using iris. "Iris can provide accuracy comparable to fingerprints. Therefore, fused scores of two uncorrelated modalities will provide better accuracy than any single modality and could achieve the target accuracy". The final biometric symposium report for the study concluded: "The biometric accuracy levels needed for the desired applications of residents of India are achievable".

13. It is submitted that the UIDAI system has been developed for civilian use and for non-forensic purposes, and that the implications of False Positive Identification Rate (FPIR) of 0.057%, based on the collection of data in accordance with prescribed standards, arrived at and documented in the Biometric Technology in Aadhaar Enrolment report applied in the UIDAI database of 60 crore residents, is the false matches of lakhs of residents that may emerge. It is submitted that this FPIR rate is attained only under standard controlled conditions of following need based certified biometric equipment, and that the UIDAI decision system to reject a biometric enrolment is being made. The Subcommittee on the Aadhaar Bill is contented to according 10% of the population of 60

aspects towards residents data and its ability to issue on duplicated identity in concordance with present law, standards and procedures.

A true copy of the Role of Biometric Technology in Aadhaar Enrolment report dated 1.11.13 is annexed herewith and marked as Annexure P-8 [Page No.239 to269]

UIDAI, in view of the above has not been mandated to act as a reservoir of biometric database to assist or undertake forensic activities and neither to go down that path.

14. On 21.10.2013, the respondent no.1 moved an application under section 91 of CrPC being Criminal Misc. Appn. No.172/2013/C in Case No. ACB 7(S)/2013, CBI/ACB/Goa being investigated by which involved rape on a minor girl-student in the school premises in Vasco, Goa. It was contended that for the purposes of investigation in the afore-mentioned case, certain palm impressions to be obtained from the scene of crime. The respondent no.1 of the said application requested the DMHC to direct the petitioners herein to provide data base including a list of persons from Goa who had enrolled with the petitioner authority so the biometrics of residents could be compared with those obtained from the scene of crime. A true copy of Criminal Misc. Appn.No.172/2013 C in Case No. ACB 7(S)/2013/CBI/ACB/Goa dated 21.10.2013 is annexed

herewith and marked as Annexure P-9. Page No. 270 to 272 ]

15. The Ld. Judicial Magistrate, First Class, passed an ex-parte order dated 22.10.2013 wherein it was observed that since the information sought was important for further investigation in the case and also considering the nature of the case, it directed D.G. UIDAI, New Delhi and D. G. UIDAI, Technology Centre, Chandigarh to provide the necessary data to Respondent. A copy of order dated 22.10.2013 passed by the Ld. JMFC is in Vol. A of No.172 of 2013/C is annexed herewith and marked as Annexure P-10. Page No. 273 to 274]

16. That pursuant to the aforesaid order the Petitioner received a letters dated 23.10.2013 from The Deputy Superintendent of Police, CBI, Anti-Corruption Branch, Goa requesting it to provide data available in the data base of UIDAI, including fingerprints of three persons whose name and address has been detailed in the said letter issued to Respondent. It is annexed herewith and marked as Annexure P-11 (Copy). Page No. 273 to 274]

17. The petitioner challenged the aforesaid order of JMFC dated 22.10.2013 by way of Criminal Writ Petition No.17 of 2014 for quashing and setting aside the order dated 22.10.2013 passed by the Ld. Judicial Magistrate, First



Class. A true copy of Criminal Writ Petition No.10 of 2014 is annexed herewith and marked as Annexure P-12 Page No. 277 to 320]

18. Notice was issued in the Criminal Writ Petition No.10 of 2014 on 04.02.2014. Further operation of the impugned order passed by JMFC was stayed for two weeks. A true copy of order dated 04.02.2014 passed by the High Court of Judicature at Bombay Bench at Goa in Cr. W. P. No.10 of 2014 is annexed herewith and marked as Annexure P-13. Page No. 321]

19. During the course of hearing on 24.12.2014, the counsel for petitioner by way of a rejoinder affidavit submitted that the current software technology system used by UIDAI did not permit automatic detection of false copy or chance/latent fingerprints. It was further submitted that the request of the respondents to compare the fingerprints of petitioner to compare with large banks and the biometric data already available was not only legally untenable on the yardstick of constitutional safeguards and beyond the mandate of the petitioner Authority, but the same was also technically not possible given the current software implementation. True copy of the letter dated 13.3.2014 is annexed as Annexure P-14 Page no.322 to 326). The UIDAI system is designed and built to de-duplicate biometrics of enrolled residents using 10

fingerprints, 2 iris and 1 facial image captured on a computer client machine specially designed and developed by UIDAI called 'Adhaar Enrolment Client' with extensive quality and compliance checks. De-duplication requires multi-modal (including 10 fingerprints, two irises and facial fusion scores). Searching enrolment data using a few partial fingerprints, which are often of moderate/poor quality, against specifications for matching with those captured at UIDAI's Aadhaar Enrolment Client machines, could potentially produce large of false matches due to its fundamental nature. This means any such random search, which was now being demanded by the Respondent No. 1, even if implemented in the current system, would put a kind of innocent person under the scanner. This has been detailed Para 2 above.

The UIDAI's Biometric Standards Committee constituted by UIDAI which was headed by Director General NIC (National Informatics Centre) and its report in December 2009 had the following assertion on the forensic application:

*'From the standpoint of the forensic application, the UID system is a viable application of biometrics. Although the primary focus of the UID system is the Committee believes that the system should meet the needs of forensic applications. The Committee considers that the system should meet the requirements out of scope.'*

20. In its Strategy Overview, UIDAI has clearly stated that the UIDAI will not share resident data. The UIDAI will adopt a balance between privacy and purpose when it comes to the information it collects on residents. The agencies may store the information of residents they enrol if they are authorized to do so, but they will not have access to the information in the UID database. The UIDAI will answer requests to authenticate identity on through a 'Yes' or 'No' response. The Authentication system where a Resident provides his fingerprint or iris and then enters his Aadhaar number ensure that CIDR or UIDAI can achieve 1:1 match. The success of authentication based on biometrics is therefore based on standard processes and the resident being available or not. Fingerprint matching, partial or chance fingerprint in the authentication process requires all ten fingerprints and is to achieve 1:N match and de-duplication.

A true copy of Strategy Overview dated 11.12.2014 is annexed herewith and marked as Annexure P-15... Page No. 327 to 379]

21. UIDAI is capturing biometrics and demographic information to issue Aadhaar numbers to the residents and to authenticate the identity of an Aadhaar number holder. It is the responsibility of UIDAI and its Registrars to ensure

safety and security of the data collected for Aadhaar enrolment. A true copy of "Data Protection and Security Guidelines for Registrars" dated 11.06.2016 annexed herewith and marked as Annexure P-16, Page No. 380 to 397]

22. UIDAI has subscribed to the general principles and procedures relating to data collection, storage and access and these include the following guidelines for Registrars:

- Registrars must collect information from residents only for the purpose related to their functions.
- The individual from whom data is being collected should be informed of the purpose for which information is being collected and how the data will be used.

In view of the above, where more than 60 crore residents have enrolled for Aadhaar by providing their demographic and biometric information sharing of their data based on technology and programme that is for civilian application will prove to lead to FALSE MATCH and has the possibility of endangering the Fundamental rights of number of residents.

23. Further it is submitted that the Right to Privacy is one of the basic human right of an individual and UIDAI is committed to protect this right. In order to, UIDAI has followed the following general principles adopted by it

the privacy aspects related to data of the residents holding ID for Aadhaar. These are as

- i. Notice to Residents: At the time of enrolment, the resident is aware of enrolling to get an ID and address proof.
- ii. Choice and Consent: Explicit consent (in writing or electronically authenticated) of resident is sought to share data for availing welfare services. Enrolment form is to obtain use of Aadhaar to his consent driver and a data is encrypted and stored in a secure and anonymised even for de-duplication purpose.
- iii. Data Collection: Minimal information collected and kept too small for identification of a resident.
- iv. Purpose Limitation: Data is collected for the issue of Identity and address proof. Explicit consent sought for any other use. Resident can withdraw consent and data is not used after resident consent and retained data is encrypted and secure.
- v. Access and Corrections: The Resident may/will have access to his authentication records and the Self Service Updation Portal and permanent Enrolment Centres provides the Resident with an opportunity to update his

information. This will include choice to the Resident to revoke the consent he has provided earlier.

- vii. Disclosure: The DATA never discloses resident data except with explicit consent of the resident, entities with which data is shared with resident consent and required to maintain data security and disclosure to law enforcement is only in accordance with law.
- viii. Security: The DATA has implemented state-of-the-art and strict data security architecture and processes to ensure security and confidentiality of resident data.
- ix. Openness: Simple and transparent enrolment process, full visibility of data recorded to the resident at the time of enrolment.
- x. Accountability: DATA has provided for a accountability framework which will be strengthened over time to protect DATA.

24. The data sharing provided in the confidential database of the residents information is governed by the following processes adopted in DATA. The DATA is required to provide a secure and transparent environment based on which residents data is shared with the agencies involved with welfare services.

The NIDAI Bill has the following provisions in the context of data sharing and security assurance of resident data:

Clause 23 (2)(d) of the Bill provides for sharing information of Aadhaar number holders with their written consent, with such agencies engaged in delivery of public benefits and services as the Authority (UIDAI) may, by order, direct. There may be instances where the resident gives the consent through other means, including electronic means.

Clause 30 of the NIDAI Bill introduced below is indicative of the data confidentiality being ensured by UIDAI.

- Clause 30 (1) The Authority shall ensure that the information and data collected, stored, processed, transmitted, and communicated by it shall be confidential and shall be authenticable, accessible and secure.
- (2) The Authority shall take measures, including security safeguards, to ensure that the information in the possession, custody or control of the Authority (including information stored in the Central Identifier Data Repository) is secured and protected against any loss or unauthorised access or use or unauthorised disclosure thereof.
- (3) Notwithstanding anything contained in any other law and save as otherwise provided, the Authority or any of its employees or any employee of any agency who maintains the Central Identifier

Data Repository shall not be made available as such or the information contained therein in the Central Identity Repository to any person.

Provided that an Aadhaar number holder may request the Authority to provide a copy of the information in such manner as may be specified in the regulations.

25. The High Court was also informed that the current system, including de-duplication sub-system, has functional capability to de-duplicate only from the biometric images created using Aadhaar Enrolment Client. This means that to search using latent/changed fingerprints on a disc, several parts of the current Aadhaar system need to be changed, re-designed, re-built and entire de-duplication system re-tuned and expanded to include further security features. Building a system that can search using latent fingerprints, quite like criminal database searches, is not within the constitutional and legal mandate of UIDAI and fundamentally against the law. UIDAI have provided their data volume to the High Court and have however sought on the said date to no longer for respondent not to seek necessary intervention.

26. Vice the impugned interim order dated 15.02.2014, the Hon'ble High Court, incorrectly stating the submission of



the petitioner, annexus, claimed that petitioner had agreed to test the competence of its data base (instead of software/ current technology systems in place) in comparing chance finger prints given in electronic form with the data base of the petitioner. The Court further directed Director-General, Central Forensic and Scientific Laboratory (CFSL), New Delhi to appoint an expert to ascertain from the petitioner's data base whether the data base of the petitioner has the technological capability for matching the chance (non-matching) electronic prints with its data base. The petitioner was also given the opportunity to obtain a report from any expert designated by the petitioner. Perpetrator for the exhibit had a reply to be given within two weeks. Further, the legal aspect of right to information and data involved would be considered by the court to the ultimate decision of this Honble Court in Justice K.D. Pathaswami vs. UOI (Writ Petition (C), No.494, 2002) which is still pending. Based on the impugned order of the court, the CFSL had already approached the petitioner on 12.03.14 to ascertain the technical capability of the JDPAI for matching the chance /finger print obtained petitioner has responded to the CFSL pointing out the discrepancies of its method related to and seeking information on the copy mythology by their expert. This copy of the letter dated 13.3.2014 is annexed as Annexure P-17.. [Page No. 398

*multidisciplinary*

the petitioner, erroneously perceived that petitioner had agreed to test the competence of its data base instead of software/ current technology systems in place of comparing chance finger prints given in electronic form with the data base of the petitioner. The Court further directed Director-General, Central Forensic Science Laboratory (CFSL), New Delhi to appoint an expert to ascertain from the petitioner's data base whether the data base of the petitioner has the technological capability for matching the chance fingerprints submitted by petitioner with its data base. The petitioner was also given the opportunity to obtain a report from any expert deemed fit by the petitioner. Report of the experts was directed to file within two weeks. The Court held that the legal aspect of right to information and right to privacy would be considered by it subject to the ultimate decision of this Hon'ble Court in Justice K.S. Puttaswamy vs. Union of India (Writ Petition No.494/2012) which is still pending. Based on the impugned order of the court, the CFSL has already approached the petitioner on 10.07.14 to ascertain the technical capability of the BIDAI for matching the chance finger print obtained with its data base. The CFSL pointing out the directions of the Hon'ble Court related to and seeking information from the petitioner, mythology by their expert. This copy of the letter dated 13.3.2014 is annexed as Annexure P-17. [Page No. 398]

*Mellissal-87*

to 399 ] Also, it is humbly submitted that as a part of a large policy dialogue, the limitations of the CIDR of UIDIA for investigation purposes have been brought to the notice of the CBI the respondents is annexed herewith and marked as Annexure P-18..... [Page No. 400 to 401]

It had been brought out in the notice of CBI that the privacy concerns of the individuals who have voluntarily enrolled for Aadhaar as also the technical architecture of the CIDR of UIDAI preclude its use for investigation. Therefore the CIDR is not of use for investigative work of CBI.

27. Being aggrieved by impugned interim order, the petitioner approaches this Hon'ble Court by way of the present Special Leave Petition.
28. That the petitioner has not filed any other Special Leave Petition in this Hon'ble Court or in any other Court against the impugned interim order dated 26.02.2014 passed by the High Court of Bombay at Cochin Criminal Writ Petition No.10 of 2014.
29. That the parties herein were parties before the Courts below.
30. That the petitioner presents the instant Special Leave Petition, amongst others on the following grounds:

#### G R O U N D S

- A. Because in the facts and circumstances of the instant case, the impugned order is not a part of the right to life cannot be legally sustained as they are contrary to well settled principle of law and as such the said order set aside.
- B. Because the impugned order merely resorts to testing the technology of the petitioner with regard to data sharing without the principal issue of data sharing vis-a-vis the fundamental right to privacy of citizens being settled. As has already been mentioned before, the said issue is the subject matter of various petitions filed before this Hon'ble Court challenging the establishment of the petitioner authority. It is pertinent to note here that the said matter on the issue of *Justice K. S. Puttaswamy (Retired) v. Union of India* and *Justice Puttaswamy (Retired) v. Union of India* is now being heard by this Hon'ble Court.
- C. Because the impugned order passed by the Hon'ble Court would not only have profound implications on the working of UIDAI and setting up a precedent, would open floodgates of similar requests being filed upon the petitioner by various investigative agencies, police calling for information.

including a metrics of test data for the purposes of investigation.

- C. Because it had been the case of the petitioners all along, including its submissions made before the High Court that it did not have the data with biometric data without the consent of the respondents the same would be against the interests of the petitioner. The current data is not in line with the guidelines upon which the guidelines for the functions clearly provides that biometric data should be shared without the consent of the individual. It is the reason for the conclusion that the petitioner has no authority to share data with the respondents and the same being obtained from the respondents. A true copy of the Data Sharing Policy used by UIDAI dated 11 is annexed herewith and marked as Annexure P-19... Page No. 402 to 408]

- E. Because the impugned order further records from various inaccuracies in the data base as per the submissions to the effect being made by the counsel for the petitioner, the impugned order records that the petitioner agrees to test the competence of its data base in comparing latent fingerprints which is completely correct. On the contrary, the petitioner

had submitted that due to the current software systems in place being in place, the authentication of data, comparison of chance fingerprints cannot be done using the current existing software. However, the order of several phones records that it is UDA's data base which is not correct which was before the submission made before the Court.

PRAYER

It is, therefore, most respectfully prayed that Your Lordships may graciously be pleased to

- (i) Grant Special Leave to Appeal to the Petitioner herein against the impugned Interim order dated 27.03.2014 of the High Court of Bombay at Ahmednagar District and Petition No.10 of 2014;
- (ii) Pass such other order or orders as the Court may deem fit and proper in the facts & circumstances of the case as well as in the interest of justice.

AND FOR THIS ACT OF KINDNESS THE PETITIONER AS IN DUTY BOUND SHALL EVER PRAY

DRAWN BY:

FILED BY:

[Zohaib Hossain]

[D.S. Mulla]

ADVOCATE

ADVOCATE FOR THE PETITIONER

DRAWN ON: 03.2014

FILED ON: 03.2014

# FP Shops Left Over Beneficiaries Report

Findings from 5 FP shops

5/29/2015  
SSAAT  
SSAAT Team

annexed with WP No. 833 of 2015  
IA No.        of 2015  
filed on 13.10.2014

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Acronyms

AP	Andhra Pradesh
DRP	District Resource Person
E-POS	Electronic Point of Sale
FP	Fair Price
MRO	Mandal Revenue Officer
PDS	Public Distribution System
SSAAT	Society for Social Audit, Accountability and Transparency



### Introduction and Context

The AP (Andhra Pradesh) state government installed electronic-POS (Point of Sale) machines at fair price shops to weed out bogus ration card holders. To get ration via e-POS machines it is required that the ration card holder and other members in the ration card have valid Aadhar cards. The ration card owner and other members on the card are then required to go to the nearest Mee Seva center and get enrolled. Enrolment process involves capturing photos, biometric and iris impressions of the beneficiaries by Mee Seva. Once the enrolment process is completed, it is the responsibility of MRO office to finish the Aadhar seeding which involves linking Aadhar numbers to the appropriate ration cards. Both Aadhar seeding and usage of e-POS machines together help identify and remove inactive, duplicate, non-existent and dead units registered under the Public Distribution System (PDS).

The AP Civil Supplies Department initiated e-POS machine based ration distribution in the month of May this year across several FP Shops (fair price shops) in the state. The results of this initiative revealed a mixed bag of interesting findings. Ration disbursement data captured from 5358 FP shops revealed that of 31, 00,419 existing ration cards about 6, 87,519 card holders did not take the ration in the month of May 2015. This is about 22 per cent of the beneficiaries. When FP shop-wise data was analysed it was found that in about 125 FP shops the percentage of left over ration card holders is 50 per cent and above. Of about 85589 ration card holders in these 125 FP shops, nearly 50151 did not take ration in May 2015.

In this context AP Civil Supplies Commissioner roped in the services of SSAAT (Society for Social Audit, Accountability and Transparency) to find out the actual reasons behind the huge number of left over beneficiaries. SSAAT was asked to do a quick audit/survey of 5 FP shops across 3 districts of Anantapur, Prakasam and Nellore. Accordingly one FP shop each, in Mudigubba mandal in Anantapur district, Cheemakurthi and Ongole in Prakasam district and Allur and Nellore (urban) in Nellore district were chosen and audit was done on the 29<sup>th</sup> and 30<sup>th</sup> of May 2015.

Methodology

The methodology adopted for this audit was to meet the left over beneficiary directly and get first hand information about the ration not taken in the month of May 2015. Also a quick interaction with the FP shop dealer to get her/his opinion was incorporated as part of the survey. Accordingly two tools have been adopted –

- Door-to-door survey<sup>1</sup> of each of the sample left over beneficiary
- An informal conversation with the FP dealers

The sample districts and mandals were chosen based on the suggestion of the Commissioner AP Civil Supplies. The FP shops were chosen based on the percentage of left over ration card holders and also to get a blend of rural, semi-urban and urban scenarios. The FP shops included in the survey are –

1. FP Shop No. 1238025 in Mudigubba mandal of Anantapur district
2. FP Shop No. 829007 in Cheemakurthi mandal of Prakasam district
3. FP Shop No. 881005 in Ongole mandal of Praksam district
4. FP Shop No. 915001 in Allur mandal of Nellore district
5. FP Shop No. 982970 in Nellore (urban) of Nellore district

The details of left over ration card holders in each of these 5 FP shops is as follows –

Mandal	FP Shop No	Total Cards	Left Over Cards	% Left Over
Mudigubba	1238025	527	458	86.91
Cheemakurthi	829007	627	323	51.52
Ongole	881005	470	245	52.13
Allur	915001	1518	788	51.91
Nellore	982970	1497	894	59.72

Considering the time frame within which the audit had to be completed, it was decided to limit the sample size to 20% of left over ration card holders in each FP shop. Further, since the sample also included urban areas where the residences of the ration card holders can be widely spread geographically the sample size of 20% was considered feasible. Accordingly the number of left over ration card holders that were included in the survey is as follows –

Mandal	FP Shop No	Left Over Cards	Sample met
Mudigubba	1238025	458	103
Cheemakurthi	829007	323	82
Ongole	881005	245	93
Allur	915001	788	203
Nellore	982970	894	309

*(It can be seen that the sample met is more than 20% in all the mandals as some of the beneficiaries were not available at the time of survey/audit and/or there were fake addresses)*

<sup>1</sup> See Annexure for the Survey Format

#### 4.2.2 DRPs

SSAAT deployed its DRPs (District Resource Persons) for this task. 25 DRPs were engaged and allotted to the above districts based on the number of beneficiaries to be met. Accordingly, Nellore being the highest got 9 DRPs allotted, Allur 6, Ongole 3, Cheemakurthi 3 and Mudigubba 4. Each DRP met around 30 left over ration card holders on an average.

All the DRPs were given complete list of the left over beneficiaries (that was shared with SSAAT by AP Online) from which they were asked to choose the 20 per cent sample covering as many geographically distributed households as possible. Orientation on the survey and the format was given by SSAAT state team to the DRPs over phone. The survey/audit started on the 29<sup>th</sup> and continued till 30<sup>th</sup> morning. Post survey, the DRPs were also engaged for data entry of the survey results. The data entry finished by 30<sup>th</sup> evening.

Overall Findings & FP Shop-wise Findings

The audit of the 5 FP shops in Mudigubba, Cheemkurthi, Ongole, Allur and Nellore majorly indicate 9 reasons for the huge number of left over ration card holders in the month of May. Livelihoods practiced by the beneficiaries have shown a visible impact on the left over numbers in some mandals like for instance Ongole. The major reasons include –

- 1. Finger print authentication failure
- 2. E-POS machine was not used and ration was given manually as the FP shop dealer did not have required knowledge of using the machine. This reason is prominent in Mudigubba FP Shop
- 3. The beneficiary was not present during the days when the ration was given
- 4. The beneficiary was not available at the address when the survey was done – this includes two reasons –
  - a. Beneficiary just stepped out of the house which is a very small percentage
  - b. Beneficiary permanently migrated to another place. This came out as a major reason.
- 5. Beneficiary has multiple cards and ration is being taken on the other card.
- 6. Aadhar number mis-match. There were two reasons significantly stated –
  - a. The aadhar number did not match with the ration card number
  - b. The name of the beneficiary did not tally with the aadhar number
- 7. In Allur the dealer said to several beneficiaries that the name of the ration card owner is not seeded in the POS machine and therefore they will not get ration. However when the due process is enquired from the district officer, it is understood that the dealer is using this excuse to discourage people from using POS machines.
- 8. In Nellore lot of fake addresses have been unearthed.
- 9. The ration card holder does not have knowledge of existence of the ration card.

The following are FP Shop-wise findings –

S No	Reason	No of affected ration card holders
1	Finger print authentication failure	14
2	Manual distribution of ration done as dealer has no knowledge of using the POS machine	73
3	Permanent migration out of the mandal	16
Total		103

*It is not clear if the manual distribution of ration was done because the dealer genuinely did not have knowledge of using the POS machine or if the dealer was attempting to discourage people from using POS machines. However, the beneficiaries stated that the dealer did not have good knowledge of using the POS machine.*

S No	Reason	No of affected ration card holders
1	Finger print authentication failure	69
2	Dealer said that the ration is out of stock	1

<sup>2</sup> See PDF Attachments for beneficiary-wise data

3	Beneficiary was not present when the ration was given	5
4	Permanent migration out of the mandal	5
5	Double ration card	2
Total		82

S No	Reason	No of affected ration card holders
1	Finger print authentication failure	50
2	Beneficiary was not present when the ration was given	35
3	Permanent migration out of the mandal	5
4	The beneficiary does not have original ration card	1
5	The beneficiary lost the ration card	2
Total		93

The audit included 35 beneficiaries from two slum areas who engage in mobile livelihoods like selling plastic items in the neighbouring villages, head loaders etc. Before introduction of POS machines their relatives used to collect ration for them. But with the introduction of POS machines it is mandatory that the beneficiary herself/himself is available for collecting the ration. This is how 35 beneficiaries missed collecting ration in the month of May.

S No	Reason	No of affected ration card holders
1	Finger print authentication failure	106
2	POS machine was not charged	1
3	POS machine was not working	2
4	The dealer did not have required knowledge to use POS machine	1
5	Dealer not present when the beneficiary went to collect ration	1
6	Dealer said that the ration is out of stock	6
7	Beneficiary was not present when the ration was given	4
8	Permanent migration out of the mandal	14
9	Aadhar mis-match	47
10	Dealer said that the POS machine is not showing Ration Card owner name	12
11	POS machine message – “Aadhar card rejected”	1
12	Ration card holder died	5
13	Double ration card	1
14	Ration card holder does not know that card exists	1
15	Ration card holder did not go to collect ration	1
Total		203

S No	Reason	No of affected ration card holders
1	Finger print authentication failure	51

2	POS machine was not working	1
3	Beneficiary was not present when the ration was given	13
4	The dealer did not have required knowledge to use POS machine	1
5	Permanent migration out of the mandal	22
6	Aadhar mis-match	46
7	Fake Address	149
8	Ration card holder does not know that card exists	10
9	Double ration card	12
10	Family migrated but mortgaged the ration card	1
11	The beneficiary name still remains in her parents card even after marriage	3
Total		309

Nellore threw up an interesting finding – Fake Address were found on 149 cards in Rajiv Gandhi colony and Deendayal colony. Further, while the actual dealer registered in the system is Banka Ramgopal Reddy, the FP Shop is being run by Ms Neelima for the past 6 years. Statements reflecting this are present in the Annexure section.

Annexure

District		Mandal						
FPSShopNo		FPSShopID						
FPSShopAddress		FPSShop Dealer Name						
1 Fingerprint authentication failure, 2 No power in POS machine, 3 POS machine not working. 4 FP dealer has no knowledge on using POS machine, 5 Dealer not present, 6 Dealer did not get Ration, 7 Ration out of stock, 8 Quality of Ration NOT GOOD. 9 Dealer giving only partial Ration, 10 Migrated for work when Ration was given. 11 Beneficiary not present at the address, 12 Others								
S.No.	Ration Card No.	Ration Card Type	No of Members on the Ration Card	Name of the Ration Card Owner	Address on the Ration Card	When did you take Ration last time	Reason for not taking Ration now	Remarks

Signature





**Introduction** The UIDAI has been setup by the Government of India with a mandate to ensure unique identification number to all the residents in the country. A key requirement of the Aadhaar is to minimize/eliminate frauds in the delivery of the service. Biometrics features are selected to be the primary mechanism for ensuring uniqueness.

No country has undertaken to build a national registry at the scale and accuracy as UIDAI initiative. Nature and diversity of India's working population adds another challenge to achieving uniqueness through biometrics features. Like other technology fields such as telecommunication, we do not have experience like developed countries to leverage for designing UIDAI's biometric systems. For example, the largest existing biometrics database in the world is one order smaller in magnitude than India's needs.

Therefore, it is necessary to create a UIDAI Biometrics Centre of Competence (UBCC) that focuses on the unique challenges of UIDAI.

### Mission

To design biometrics system that enables India to achieve uniqueness in the national registry. The endeavour of designing such a system is an ongoing quest to innovate biometrics technology appropriate for the Indian conditions.

### Goals

The mission of UBCC can be achieved through the following distinct goals:

- **Specifications** UBCC will specify the initial biometrics system and will enhance/revise/replace the initial iterations through new technologies and best practices.
- **Characterisation** UBCC will evaluate and characterise technology, devices, algorithms and processes to assess what and when specifications need to be revised or enhanced.
- **Innovation** UBCC will push the state of art in Biometrics to achieve UIDAI's objectives.
- **Assistance** UBCC will be a national resource to other government departments for building their biometric systems.

### Strategy

UBCC will achieve its goals through the following four-pronged strategy:

- **Talent** UBCC will attract and hire world class biometric talent. UBCC will hire a mix of people from different backgrounds, including computer scientists and engineers.
- **Collaboration** UBCC will collaborate with other technical departments, academia, industry, international experts and international agencies to accumulate and share combined knowledge, technology, and expertise. UBCC will also build strong relationships with international academic institutes for ongoing research.
- **Reference** UBCC will build reference architecture, prototypes, and test cases for the biometric system. UBCC will build the test cases for the biometric system both during the initial development and during the operation of the biometric system.
- **Training** UBCC will build and maintain state-of-the-art training and testing facilities for the biometric system.

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No.F 12013/13/2011/RTI-UIDAI  
 Government of India  
 Planning Commission  
 Unique Identification Authority of India

Annexure p-15  
 of WP No. 37 of 2015

2<sup>nd</sup> Floor, Tower-I Jeevan Bharati Building  
 Connaught Circus, New Delhi 110001

Dated 21st July, 2011

**ORDER NO. Appeal/3/2011**

Name of the Appellant.

Sh. Veeresh Malik

Address of the Appellant.

D-61, Defence Colony, New Delhi 110024

Date of receipt of Application by CPIO: 15.3.2011

Interim Reply 18/3/11, 21/4/11

Date of Order of the CPIO: 25.5.2011

Sub: **Order of First Appeal u/s 19 under RTI Act, 2005**

The appellant, vide his letter dated 02.06.2011 has raised the following Grounds of Appeal.

**Ground of Appeal :**

- a) The reply of CPIO vide letter dated 25<sup>th</sup> of May, 2011 was found to be incomplete and casual in nature. In addition, learned CPIO has not provided information specifically as requested vide full name, address and websites of the foreign companies which are of US and non-US origin or control

2 In the first appeal, the appellant has sought the following relief:

"That the learned CPIO was kind enough vide his response dated 25<sup>th</sup> of May 2011 to provide information, but same was found to be incomplete, and casual in nature. In addition, learned CPIO has not provided information specifically as requested vide full name, address and websites of the foreign companies which are of US and non-US origin or control. Due diligence is requested to be exercised here in response, since many companies which claim to be American are actually registered in tax havens abroad, for example.- Google. It is therefore requested that suitable care be taken when providing me with this response

3 After careful consideration of facts and material on records, the order of the CPIO and the facts and Grounds of Appeal, the appeal is disposed off as under:

**353**

3.1 As regards Grounds (a) to (d) are concerned there is no dispute as information required has been provided to and has been duly acknowledged by the Appellant. However, with the CPIO's reply some other information collected from our different divisions have been added in this order (appeal). The following 3 Biometric Service Providers (BSPs) to UIDAI are added herewith.

- i) Sathyam Computer Services/Sagem Morpho
- ii) LI Identity Solutions
- iii) Accenture Services

3.2 The above organizations responded to this organization's Expressions of Interest (EOI) and submitted their tenders for accepting the projects on the basis of fulfilling the following clauses:

- a) The prime respondent should have an office in India in the form of a Registered Office
- b) If the Prime respondent does not have a registered office in India, then it should have a Branch office, Representative office, Sales office, or an office of its subsidiary company in India for the purpose of submission of the expressions of interest response
- c) If the prime respondent is unable to meet the stated conditions, it shall submit a declaration/confirmation, stating that it shall have Registered Office in India for the purposes of signing of contracts with the UIDAI

3.3 There are no means to verify whether the said companies/organizations are of US origin or not. As per our contractual terms & conditions, only the companies/organizations those who are registered in India can bid. Any further information in this regard can be obtained from the UIDAI public domain [www.uidai.gov.in](http://www.uidai.gov.in)

4. In view of this, the information sought for by the applicant in his RTI First Appeal stands disposed off. In case Appellant wants to appeal against the appellate authority reply, he may file 2nd appeal to Central Information Commission within 90 days.



(Davinder Kumar)  
Deputy Director General & Appellate Authority  
Tele: 011-23752755

To

Shri Veeresh Malik  
D-61 Defence Colony  
New Delhi 110 024

Copy to CPIO (Shri Ashish Kumar, ADG), UIDAI, New Delhi

भारतीय गैर न्यायिक

354

भारत INDIA

रु. 500

FIVE HUNDRED  
RUPEES

पाँच सौ रुपये

सत्यमेव जयते

Rs. 500

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ANNEXURE RA-2 (AT PAGE 430)  
OF WP NO. 37 OF 2015

### CONTRACT AGREEMENT

THIS CONTRACT AGREEMENT ("Agreement") made the 24<sup>th</sup> day of August 2010

### BETWEEN

The President of India acting through the Director General, Unique Identification Authority of India (UIDAI) (hereinafter referred to as "Purchaser") which expression shall unless repugnant to the context or meaning thereof mean and be deemed to include its authorized agents, representatives and permitted assigns of the One Part

### AND

The Party M/s L-1 Identity Solutions Operating Company Private Limited, a company incorporated under the Indian Companies Act 1956 having its registered office at 2, Frontline Grandeur, 14 Walton Road, Bangalore 560001 (hereinafter referred to as "L-1 India"), a subsidiary of L-1 Identity Solutions Operating Company, a Delaware USA corporation (identified in Purchaser's Bid Document as the "Prime Consortium Member" and "Prime Bidder" and hereinafter referred to as "Biometric Solution Provider" or "BSP"), which expression shall unless repugnant to the context or meaning thereof mean and be deemed to include its successors and permitted assigns of the Other Part



*[Handwritten signature]*  
B. Manoj Kumar

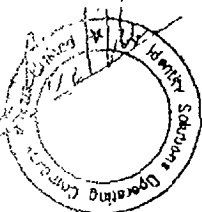
## WHEREAS

- (i) The Purchaser had invited bids vide their Bid Document number Bid No. D-11018/14/Tech/10-UIDAI for providing certain services, namely, **Design, Supply and Implementation of Biometric Solution** for Unique Identification Authority of India (hereinafter referred to as "Bid Document");
- (ii) The BSP had submitted its proposal dated 21.06.2010 (hereinafter referred to as the 'Bid') for the provision of such services in accordance with BSPs proposal as set out in its Bid and in accordance with the terms and conditions of the RFP and this Agreement;
- (iii) The Purchaser has agreed to appoint the BSP for the provision of such services and the BSP has agreed to provide those services as are represented in the Bid, including the terms of this Agreement, the Annexures and Scope attached hereto and in accordance with the terms of the Bid, and in terms of the discussions, negotiations and clarifications in relation to the implementation of the scope of work and the Agreement;
- (iv) While the BSP is bound to all of the provisions of this Agreement, in accordance with the requirements of the Purchaser's Bid Document (Section II, clause 34.5) and the Purchaser's earlier issued Invitation for Expression of Interest (clause 4.3(ii) b), the BSP established L 1 India for the purposes of signing this Agreement with the Purchaser;
- (v) In consideration of the foregoing and the mutual covenants and promises contained herein and other good and valuable consideration the receipt and adequacy of which is hereby acknowledged, the parties intending to be bound legally, for implementation of this Agreement;

## NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the General Conditions of Contract referred to;
2. The following documents and the provisions thereof shall be deemed to form and be read and construed as part of this Agreement (hereinafter the "Contract") viz:
 

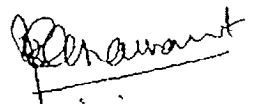
a. General Conditions of Contract	Annexure A
b. Special Conditions	Annexure B
c. Service Level Agreement (SLA)	Annexure C
d. Work Allocation & Service Level	Annexure D
e. Scope of Work Annexure thereto	Annexure E

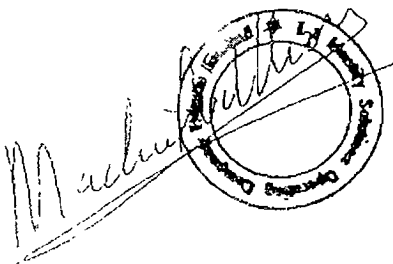


*[Handwritten signature]*  
 For and on behalf of the Purchaser  
 Director, UIDAI

f. Minimum Requirements	Annexure F <b>357</b>
g. Letter for withdrawing the Deviations	Annexure G
h. Break-up of cost components	Annexure H
i. Non Disclosure Agreement	Annexure I
j. Clarifications dated 5 <sup>th</sup> , 7 <sup>th</sup> , 15 <sup>th</sup> , 16 <sup>th</sup> of June 2010 issued by the Purchaser	
k. Technical Bid submitted by BSP	Annexure J
l. Commercial Bid submitted by BSP	Annexure K
m. Acceptance Letter of L1 Bidder commercial quote	Annexure L
n. The Purchaser's order dated 30 <sup>th</sup> July 2010	Annexure M

3. In consideration of the payments to be made by the Purchaser to L-1 India as hereinafter mentioned, the BSP hereby covenants with the Purchaser to provide the Goods/ Services and to remedy defects therein in conformity in all respects with the provisions of the Contract. Brief particulars of the goods and / or services which shall be supplied/ provided by the BSP along with cost/charges thereof are as per Annexure H;
4. The Purchaser hereby covenants to pay L-1 India in consideration of the provision of the Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract;
5. The Parties intend for the entire provisions of each of the aforesaid documents to be read together harmoniously to form the Contract and to regulate their relationship *inter se*. In the event of any conflict in the provisions of the above listed documents, the order of precedence of the provisions thereof shall be in the order as set out above,
6. Subject to the rules of dynamic allocation as per Annexure D - Work allocation & Service Levels and any mutually agreed upon Change Orders between the parties, the Contract Value shall not exceed Rs.33,87,50,000/- (Rupees Thirty Three Crores Eighty Seven Lakh Fifty Thousand Only)(inclusive of all Taxes) for an estimated maximum of 1050 crore Allotted Enrolment Transactions after successful de duplication, at the cost of Rs 2.75 (Rupees Two and Paise Seventy Five only) (inclusive of all Taxes) per Allotted Enrolment Transaction. The aforesaid total Contract value includes the amount of Rs 5,00,00,000/- (Rupees Five Crore Only) towards delivery, installation and acceptance of hardware for both primary and business continuity sites of UIDAI for de-duplications of an estimated capacity of first 1(one) crore Allotted Enrolments Transactions;

  
 B.B. Nanawati, DDC  
 Unique Identification Authority of India  
 Planning Commission, Jeevan Bhara  
 Connaught Circus, New Delhi-110001



7. This Contract and its stipulated obligations and conditions shall be effective from 30.07.2010 (hereinafter "the said date") i.e. the date of issue of Firm Orders and shall be valid initially for a period of two (2) years or completion of 20 Crores enrollment transactions, whichever is earlier, from the said date,

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with their respective laws the day and year first above written

Signed, Sealed and Delivered for &  
on behalf of M/s L-1 Identity  
Solutions Operating Company  
Private Limited

Signed

Name: Machiel van der Harst

Designation: Technical Officer

Date: August 24<sup>th</sup>, 2010  
Place: New Delhi

Signed, Sealed and Delivered for and on  
behalf of the President of India acting  
through the Director General, Unique  
Identification Authority of India.

Signed

Name: B. B. Nandan

Designation: Deputy Director General

Date: August 24<sup>th</sup>, 2010  
Place: New Delhi

In the presence of

Signed

Name: Kalidindi R N

Designation: Director, Business  
Development, L1 ID

Date: August 24<sup>th</sup>, 2010  
Place: New Delhi

In the presence of

Signed

Name: Ajay Nandan

Designation: Assistant Director General,  
Unique Identification Authority of India,  
Planning Commission,

Date: August 24<sup>th</sup>, 2010  
Place: New Delhi

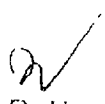




## Special Conditions

### 1. Definitions

- I. "Acceptance of Bid" means the letter/fax or any memorandum communicating to the bidder, the acceptance of his bid, and includes an advance acceptance of his bid.
- II. "Business Day" means any day that is not a Sunday or a public holiday (as per the official holidays observed by UIDAI).
- III. "Confidential Information" means any information disclosed to or by any Party to this Contract and includes any information in relation to the Parties, a third party any other person any such information that may come to the knowledge of the Parties hereto / Biometric Solution Provider's Team by virtue of this Contract that
  - a. is by its nature confidential or by the circumstances in which it is disclosed confidential; or
  - b. is designated by the disclosing Party as confidential or identified in terms connoting its confidentiality;
 but does not include information which is or becomes public knowledge other than by a breach of this Contract;
- IV. "The Purchaser" means the President of India acting through the Director General, Unique Identification Authority of India (UIDAI), Planning Commission, Government of India
- V. "Purchase Officer" means the officer signing the acceptance of bid and includes any officer who has authority to execute the relevant contract on behalf of the Purchaser
- VI. "UIDAI", means the Director General, Unique Identification Authority of India (UIDAI) or any other representative authorized by the Director General, UIDAI and also including the officer of the UIDAI across India
- VII. "Document" means any embodiment of any text or image however recorded and includes any data, text, images, sound, voice, codes or and databases or microfilm or computer generated micro fiche.

  
D. B. Nandawati, PM

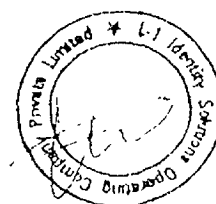


- VIII. "Purchaser's Representative/Project Coordinator" means the person or the persons appointed by the Purchaser from time to time to act on its behalf for overall co-ordination, supervision and project management.
- IX. "Primary Site" means the Central ID Data Repository ("CIDR") Data Center in Delhi that would house the Information and Communication Technology (ICT) equipment required for carrying out the centralized operations of CIDR
- X. "BCP Site" means the Business Continuity Site of the CIDR located at a Data Centre in Bangalore that would house ICT equipment similar to the Primary site and which would be capable of running business operations of the CIDR in case of an eventuality.
- XI. "Datacenter Sites" means the Primary and BCP site of the CIDR including their respective Data Center space, Communications Room and Non-Data Centre space wherein the delivery, installation, integration, management and maintenance services as specified under the Annexure E - Scope of Work are to be carried out for the purpose of this Contract. Each individually referred to as Datacenter Site and collectively as Datacenter Sites.
- XII. "Prime Consortium Member" means the Prime Member of the Consortium, in case of a consortium bid. For the purpose of this contract Prime Consortium Member means the Biometric Solution Provider.
- XIII. The "Biometric Solution Provider" means the successful bidder whose bid has been accepted by the Purchaser and with whom the order for providing a turnkey solution towards Design, Supply and Implementation of Biometric Matching Services has been placed as per requirements and terms and conditions specified in this Bid/contract and shall be deemed to include the Biometric Solution Provider's successors, representatives (approved by the Purchaser), heirs, executors, administrators and permitted assigns, as the case may be, unless excluded by the terms of the contract.
- XIV. "Biometric Solution Provider's Team" means the Successful Bidder alone or along with all of its consortium members, who have to provide goods & services to the Purchaser under the scope of this Bid / Contract. This definition shall also include any and/or all of the employees of the Prime Consortium Member, consortium members, authorized service providers/partners/agents and representatives or other personnel employed or engaged either directly or

indirectly by the Biometric Solution Provider for the purposes of this Bid / Contract

- XV. **"Biometric Solution Provider's Representative/ Project Coordinator"** means the person or the persons appointed by the Biometric Solution Provider from time to time to act on its behalf for overall co-ordination, supervision and project management
- XVI. **"Parties"** means the Purchaser and, the Biometric Solution Provider, and **"Party"** means either of the Parties.
- XVII. **"Contract"** means the Agreement entered into between the Purchaser and the Biometric Solution Provider including all attachments and Annexes thereto, the Bid and all Annexes thereto and the agreed terms as set out in the Bid, all documents incorporated by reference therein and amendments and modifications to the above from time to time.
- XVIII. **"De-Duplication"** means assurance through biometric comparisons that no enrolled person has been assigned more than one Unique ID number
- XIX. **"Enrolment Transactions"** mean the transaction to perform de-duplication check in order to establish if there exists any duplicate(s) for the subject to be enrolled.
- XX. **"Allotted Enrolment Transactions"** mean the transaction allocated to a Biometric Solution to perform de-duplication in order to check if there exist any duplicate(s) for the subject being enrolled.
- XXI. **"Goods"** means all of the equipment, sub-systems, hardware, software, products accessories and/or other material / items which the Biometric Solution Provider is required to supply, install and maintain under the contract.
- XXII. **"System"** means all of the goods under the scope of this contract together as an integrated solution.
- XXIII. **"Commissioning of System"**: The system shall be deemed to have been commissioned, when all the activities as defined in **Clause 9.3 under Annexure F Scope of Work** have been successfully executed and completed
- XXIV. **"Acceptance of System"**: The system shall be deemed to have been accepted by the Purchaser, subsequent to its commissioning, when all the activities as defined in **Clause 10 under Annexure E - Scope of Work** have been successfully executed and completed

✓  
R.D. Nanavati, Director  
General, Maharashtra Sahakar  
Maharashtra Sahakar  
Maharashtra Sahakar



- XXV. "Effective Date" means the date on which this Contract is signed and executed by the parties hereto. If this Contract is executed in parts, then the date on which the last of such Contracts is executed shall be construed to be the Effective Date;
- XXVI. "Intellectual Property Rights" means any patent, copyright, trademark, trade name, service marks, brands, propriety information, UIDAI Application Software whether arising before or after the execution of this Contract and the right to ownership and registration of these rights.
- XXVII. "Kick Off Meeting" means a meeting convened by the Purchaser to discuss and finalize the work execution plan and procedures with the Biometric Solution Provider.
- XXVIII. "Service" means services to be provided as per the Annexure E - Scope of Work as specified in this bid document and incidental services, such as design, supply and implementation or any other such obligations of the Biometric Solution Provider covered under the Contract. In addition to this, the definition would also include other related/ancillary services that may be required to execute the Scope of Work under this contract.
- XXIX. "Service Specification" means and includes detailed description, statements to technical data, performance characteristics, and standards (Indian as well as International) as applicable and as specified in the Contract, as well as those specifications relating to Industry standards and codes applicable to the performance of the work, work performance quality and specifications affecting the work or any additional specification required to be produced by the Biometric Solution Provider to meet the design criteria/ and/ or contract requirements.
- XXX. "The Contract Value" means the unit price per allotment enrollment transactions times maximum of 10 Crore allotted enrollment transactions during contract period notwithstanding the rules of dynamic allocation as per Annexure D - Work allocation & Service Levels.
- XXXI. "Notice" means:
- i. a notice, or
  - ii. a consent, approval or other communication required to be in writing under this Contract.

B B. Nanawati, doc  
 The Board of Directors  
 The Government of India  
 Central Government



SEE PAGE 333 OF THE REJOINDER  
IN WP NO. 37 OF 2015

2. Escrow

- 2.1 "Upon UID's written request, and pursuant to a mutually-agreeable, industry-standard escrow agreement, from the time of commencement of the contract for a period up to 2 years after expiry of contract, Biometric Solution Provider shall place in escrow, a copy of the source code for the Software, consisting of a full source language statement of the program or programs comprising the Software, in a form suitable for reproduction and use by computer; complete program maintenance documentation, including all technical manuals, release notes; and all other material necessary to allow a reasonably skilled programmer or analyst to understand, maintain, modify and enhance the Software without Biometric Solution Provider's assistance or reference to any other materials. The escrow agreement shall, at a minimum, provide for release of the source code to UID in the event Biometric Solution Provider ceases to do business as an ongoing concern or in the event of breach of contract by the Biometric Solution Provider. Biometric Solution Provider shall be responsible for all fees of the escrow agent."

3. Privacy of data


- 3.1 In course of the Agreement, the Biometric Solution Provider may collect, use, transfer, store or otherwise process (collectively, "process") information that pertains to specific individuals and can be linked to them ("personal data"). Biometric Solution Provider warrants that it shall process all personal data in accordance with applicable law and regulation. Biometric Solution Provider further warrants that it shall process such personal information only for the purposes of this Agreement, and shall not use or disclose such information, otherwise pursuant to purposes of the Agreement

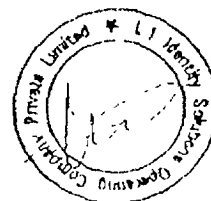
4. Right for security clearance

- 4.1 UID may execute background checks on any or all employees of the Biometric Solution Provider who are assigned to work on the project. Such background checks will include drug screening and checks for criminal activity, credit history checks, and checks on qualifications, suitability and experience of Biometric Solution Provider's employees before and/or during their assignment to the project under this Agreement

5. Opening of registered office in India

- 5.1 The Biometric Solution Provider should have an office in India in the form of a registered office.

  
S. D. Handwani, Co.  
Director, Biometric Solution  
Provider



6. Adherence to disclosure norms
- 6.1. UID is entitled to audit any amount claimed by the Biometric Solution Provider in an invoice submitted to UID, and/or require the Biometric Solution Provider to disclose any document, material, data, and/or information in relation to the Agreement
7. Compliance to requirement of technical queries in relation to performance and system behavior
- 7.1. Biometric Solution Provider will provide UID with support services (including but not limited to addressing any technical query raised by UID) as and when reasonably sought by the UID, in relation to use of the software, performance of services by Biometric Solution Provider, or any matter relating to them
8. Compliance to Indian IT Act 2008 and amendments thereof; UIDAI Act, if any passed by Government of India at a future date
- 8.1 The Biometric Solution Provider undertakes that during the term of this Agreement, it shall:-
  - i. comply with all applicable laws and regulations as amended from time to time, in the performance of its obligations, and
  - ii. hold all valid and current licenses required to perform the services, in relation to this Agreement and any matter relating to them



E. S. Nanawati, pro.

For and on behalf of the undersigned,  
E. S. Nanawati, pro.



284 366

ANNEXURE P-10

14.07.2011

0821242838311

DCOFFICE

ANNEXURE P-10

OF WP NO. 37 OF 2015

TO THE 3<sup>RD</sup> ADDL. 1<sup>ST</sup> CIVIL COURT (LOWER  
DIVISION), MYSORE CITY

TO THE ATTENTION OF JUSTICE

dt. 5-1-2011

**FIRST INFORMATION REPORT**

(Under Section 154 Cr.P.C.)

FIR Number : 01      Police Station : NARASIMHARAJA

FIR Date : 05.01.2011      District : MYSORE CITY

Type : FIR      State : KARNATAKA

2. ACT AND SECTIONS

ACT

SECTION

IPC 1860

468, 471, 420

3.(a) Occurrence of Offence :

Date From : 01:01:2011 Date To : 01:01:2011

Time From : 00:00:00      Time To : 00:00:00

Time Period : Saturday.

(b) Information Received at P.S. Date: 05:01:2011 Time  
: 08:00:00.

(c) General Diary Reference Entry No(s): Time  
: 05:01:2011 At 08:00:00 AM

4. Type of Information : REPORT

5. Place of Occurrence: IN FRONT OF BALABHAVAN

BANNIMANTAP, MYSORE CITY, KARNATAKA.

(a) Direction and Distance from P.S.: 1KM TOWARDS  
WEST

285367

BEAT NO. 8<sup>TH</sup>

(b). Address IN FRONT OF BALABHAVAN  
BANNIMANTAP, MYSORE CITY,  
KARNATAKA

(c) In case outside limit of this police Station, then  
name of P.S. District :

6. Complainant / Informant :

(a) Name : SRI YASHAVANTHA KUMAR K.N.

(b) Father/s/Husband's name:

(c) Date / Year of Birth :

(d) Nationality: India

(e) Passport no.:

(f) Date of Issue:

(g) Date of Issue:

(h) Occupation : POLICE INSPECTOR

Address: NARASIMHARAJA POLICE STATION, MYSORE  
CITY

7. Details of known / suspected/unknown accused  
with full particulars :

1. Sidda Raju 2. Madhusudhan 3. Khaleel

4. Mahadeva 5. Putta Swami 6. Venkatamma

7. Mahadevaiah 8. Mahesh 9. Ali 10. S.V.Subramanya-

All these people are Residents of Mysore.

8. Reasons for delay in reporting by the Complainant/  
Informant:-

9. Particulars of properties Stolen/Involved:-

10. Total Value of properties Stolen/Involved:

11. Inquest Report /U.D. Case No., if any:-

12. First Information Contents :-



On 1<sup>st</sup> Jan 2011 at 9.30 hrs on TV9 it was reported that near aadhaar registration centres in Bala Bhavan and around central Bangalore, the public who does not had proper documents to register for aadhaar were served with fake affidavit for commission. The non-residents who were living in other areas were provided fake affidavit on the basis of which UIDAI registration could be done for them. In TV9 it was revealed that the people from Mysore Sidda Raju, Madhusudhan, Khaleel, Mahadeva, Putta Swami, Venkatamma, Mahadevaiah, Mahesh, Ali as well as others in joint association with central government notary S.V. Subramanya were involved in preparing the fake affidavit. The affidavit paper had left the name, address and personal details blank but had the seal and signature of notary. Later the blank affidavits were filled with details of the applicant and wrong permanent addresses where they did not stay. They collected amounts varying from Rs.100-Rs.5000. There are many more cases like this exists which needs to be found. The above report has been considered as complaint on behalf of the government and booked FIR under Sec. 420, 468, 471.

13. Action taken : Since the above information reveals commission of offence (s) U/s as mentioned at Item No.2:

287369

- (1) Registered the case and took up the investigation or
- (2) Direct (Name of I.O) SRI. YASHAVANTHA KUMAR.K.N.

Rank : PI number : 0900230294

To take-up the investigation due to.

- (3) Refused investigation due to
- (4) On point of jurisdiction transferred to P.S.....District...  
State....

FIR read over to the Complaint / Information, admitted to be correctly Recorded, and a copy given to the complainant / informant free of costs.

R.O.A.C.

Signature of the Officer-in-Charge  
Police Station : NARASIMHARAJA  
POLICE STATION  
Name: SRI YASHAVANTHA KUMAR KN  
Rank: PI Number : 0900230294

14. Signature/Thumb impression of dispatch of the complainant / informant.
15. Date & Time of dispatch to the Court Date: 05.01.2011  
Time: 08:30:00

**COPY SUBMITTED:-**

1. TO THE COMMISSIONER OF POLICE, MYSORE CITY,
2. TO THE ASST. COMMISSIONER OF POLICE,  
NARASIMHARAJA DIVISION, MYSORE CITY.
3. STATION COPY.
4. COMPLAINANT COPY.

/True typed copy/

- **biometric identification: device specification and actual performance considered for the operations of the UIDAI**

◦ *hans varghese mathews*

*The Centre for Internet and Society, Bangalore*

- **summary of findings**

1 A *biometric* is a numerized representation of some generic physical feature of an organism: and the biometric devices here are those intended for the *identification of individuals*. Such a device is supplied with a *specified error rate* the probability that the biometrics of distinct individuals will *match*<sup>1</sup> When more than one device is used, and a suite of biometrics is to identify an individual, the chance of such identification errors can be derived from the specified error rates of the individual devices and for the matching procedure the UIDAI is following we compute  $0.1155001 \cdot 10^{-11}$  as the *specified identification error*<sup>2</sup> The error rates specified for biometric devices would be estimated under laboratory conditions, one expects, by their manufacturers: when they are used for the rapid identification of a large population, as in our case, their performance in the field might fall short of what their specified errors promise: and we find that

- *identification error in the field considerably exceeds, by a factor of 6 almost, the specified identification error for the matching procedure followed by the UIDAI*

We are able to draw our conclusions by examining the result of an experiment performed by the UIDAI when 84 million citizens had been registered in their biometric database. The process of obtaining and storing biometrics is termed *enrollment*; and the stored suites of biometrics are called *templates*. The experiment estimated the chance of a *false positive match*: which occurs when the suite of biometrics of a new individual, one who is not actually enrolled, happens to match *some or other* stored template. The chance of a false positive match is the conditional probability, therefore, of a match occurring *given* that the individual is not enrolled: and it is usually termed the *false reject rate*. The rate depends on the number of individuals already enrolled. Write  $\rho(n)$  for the false reject rate when  $n$  individuals have been enrolled: the specified identification error is the chance, now, that the biometrics of a new individual will match *any one* given template: and if  $\xi$  is the specified identification error then

$$\rho(n) = 1 - [1 - \xi]^n$$

Now for an identification error of  $(0.1155001) \cdot 10^{-11}$  and an enrolled base of 84 million the false reject rate should be  $(0.97020084) \cdot 10^{-4}$  at most: but the UIDAI got an estimate of  $(0.57725) \cdot 10^{-3}$  from its experiment. The bound on this rate

<sup>1</sup> Matching occurs when numerized representations are too similar: and similarity is usually decided by the *distance* between them falling below some *threshold*, for some appropriate measure of distance between the numerized representations the given device produces.

<sup>2</sup> The UIDAI is using iris scanners and fingerprint scanners: and has made their specified error rates available to researchers at the Takshashila Institute: who have made them public. The specified error for their make of iris scanner has been reported as  $1/13100$ , the specified error for the fingerprint scanner as  $1/500$ . The UIDAI has not published its matching procedure: but our investigations have led us to conclude the following: a match is taken to occur if both irises match and *any one* digit also does.

comes from the relation  $1 - [1 - \xi]^n \leq n \cdot \xi$ , which holds for  $0 < \xi < 1$  generally, from this, and from the relation between  $\rho(n)$  and  $\xi$  above, one can get the bounds

$$\frac{\rho(n)}{n} \leq \xi \leq \frac{-\log[1 - \rho(n)]}{n}$$

We have estimated the identification error in the field by using the UIDAI's experimental value as a reliable operational estimate of  $\rho(n)$ : and  $(0.687400801) \cdot 10^{-11}$  is our estimate of what  $\xi$  must be in the field.

2 The false reject rate is one measure of the operational accuracy, in the field, of a suite of biometric devices. A equally important measure is its converse: the conditional probability that an individual is *not enrolled*, actually, given a match between his or her biometrics and some or other stored template. We shall term this *mistaken identification* and our principal finding is that

- *the probability of mistaken identification rises considerably between the initial and final stages of enrollment. by a factor of 10, as it happens, between the first and last tenths of the population enrolled.*

We have proceeded here by estimating the total number of matches expected, and the number of false matches among these, for successive millions of individuals enrolled: for which we have used the lower of the bounds on  $\rho(n)$  given by

$$n \cdot \xi \left[ \frac{1 - \xi}{1 - \xi + n \cdot \xi} \right] \leq 1 - [1 - \xi]^n \leq n \cdot \xi$$

The actual numbers are not negligible. The UIDAI should expect a total of 534,010 matches to occur for the first 100 million enrolled out of which 34,180 will be mistaken matches. But a total of 1,280,208 matches are expected for the last 100 million enrolled, and among these fully 780,382 would be mistaken matches. The discrepancy is even more extreme for small initial and final subsets: we estimate 50,325 matches for the first 10 million, of which only 341 would be mistaken ones; but 13,1050 matches are expected for the last 10 million, out of which 8,1607 would be mistaken matches<sup>3</sup>

3 When a match occurs the UIDAI must decide whether or not the individual is already enrolled: for which the templates matching that person's suite of biometrics must be examined. The amount of work here depends on how many templates will match a given suite of biometrics, generally, when a match does occur. We get an upper bound of 10,922,437 on the total number of matches when the entire population of 1.2 billion has been enrolled: of which 4,924,539 would be mistaken ones. We estimate that only 11,267,203 matching templates will have to be examined, however, to decide which matches are mistaken and our last finding is that

- *only occasionally will more than one matching template have to be examined, when a match occurs, in order to decide whether or not that match is mistaken.*

<sup>3</sup> The bounds above come from Professor Nico Temme of the CWI in The Netherlands whose freely given help we gratefully acknowledge. To count matches and mistaken matches one needs, besides identification error, the probability that enrolled individuals will try to register again; and one needs, as well, the chance of a match for an already enrolled person. The UIDAI has conducted an experiment which allows one to estimate the latter, and it has estimated to its satisfaction the former probability as well.

